

# Work Order ID 78652

**\*78652\***

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January-12-12 8:04:01 AM

Item ID: D4518-3 . Accept **\*N900040100\*** Setup Start **\*NS1\***  
 Revision ID: Stop **\*NS2\***  
 Item Name: Lock Barrel Spring  
 Start Date: 12/01/2012 Start Qty: 50.00 **\*50\*** Cust Item ID:  
 Required Date: 02/02/2012 Req'd Qty: 50.00 **\*50\*** Customer:  
 Reference:

Approvals: Process Plan: M.L.J Date: 12/01/12 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_ Run Start **\*NR1\***  
 QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_ Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D4518	A								
100	PURCHASING	0.00							
<b>*100*</b>									
Purchasing	Memo	0.00							
Purchasing	Issue P/O: <u>15863</u>								
	Manufacture as per D4518 Dwg								
	Possible supplier: Victoria Spring								
	Material release note is required.								
110	Receive & Inspect for Damage & Mat'l Certs	0.00							
<b>*110*</b>									
Packaging	Memo	0.00							
Packaging	Ensure certificate of conformity is attached								
120	QC6- Inspect dimensions to drawing	0.00							
<b>*120*</b>									
QC	Memo	0.00							
Quality Control									

CL 12/01/12 50

10002/8 (50)

(50)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

January-12-12 8:04:01 AM

**\*78652\***

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**Accept**

**\*N900040100\***

Setup Start \*NS1\*

Stop \*NS2\*

**Start Date:** 12/01/2012      **Start Qty:** 50.00

**\*50\***

**Cust Item ID:**

**Required Date:** 02/02/2012      **Req'd Qty:** 50.00

**\*50\***

**Customer:**

**Reference:**

**Approvals:**      **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Run Start \*NR1\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop \*NR2\*

Operation	Description
1	Start
2	Initialize variables
3	Calculate the sum of the first 10 natural numbers
4	Print the sum
5	End

### Set Up/ Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

130

Identify as per dwg & Stock Location:

0.00

**\*130\***

## Packaging

## Memo

0.00

## Packaging

140

QC21- Final Inspection - Work Order Release

0.00

**\*140\***

QC

## Memo

0.00

## Quality Control

SP12-02-08.

12/2/82

W 1202.00

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

January-12-12 8:04:05 AM

Page 1

Work Order ID: 78652

**\*78652\***

Parent Item: D4518-3

**\*D4518-3\***

Parent Item Name: Lock Barrel Spring

Start Date: 12/01/2012

Required Date: 02/02/2012

Start Qty: 50.00

Required Qty: 50.00

Comments: IPP REV:A 12.01.11 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4518-3P <b>*D4518-3P*</b> Lock Barrel Spring		Purchased	No				Each	0.0000		50			
									**	<i>12/2/12</i> <i>50</i>			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

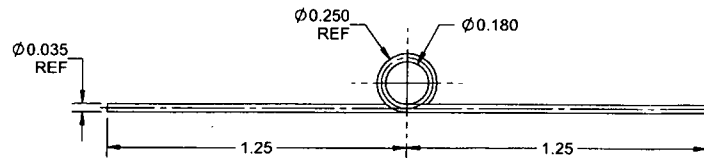
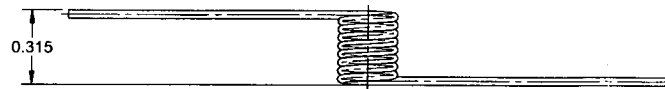
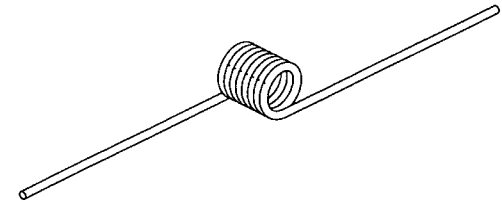
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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**NOTE:** Date & initial all entries

# SPECIFICATION CONTROL DRAWING



**D4518-1 TORSION SPRING**

STOP COPY  
RETURNED  
ENGINEER  
UNCONTROLLED  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK COPY  
NO. 78652 M.C.J  
12/01/12

RELEASED  
2012-01-10  
M

## NOTES:

- 1) MATERIAL: 301/304 STAINLESS STEEL SPRING WIRE,  $\phi 0.035$ , PER ASTM A666/A313
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: N/A
- 6) IDENTIFICATION: WITH DART P/N "D4518-1" AND BATCH NUMBER "BXXXXX" PER DART QSI 044 6.6 (REMOVABLE TAG)
- 7) WEIGHT: LESS THAN 0.01 lbs

REV.	NEW ISSUE	DESCRIPTION	MB	11.12.05
DESIGN			BY	DATE
DRAWN				
CHECKED				
MFG. APPR.				
APPROVED				
DE APPR.				
DATE	11.12.05			

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D4518** REV. A  
SHEET 1 OF 2  
TITLE **SPRING, LATCH** SCALE NTS

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

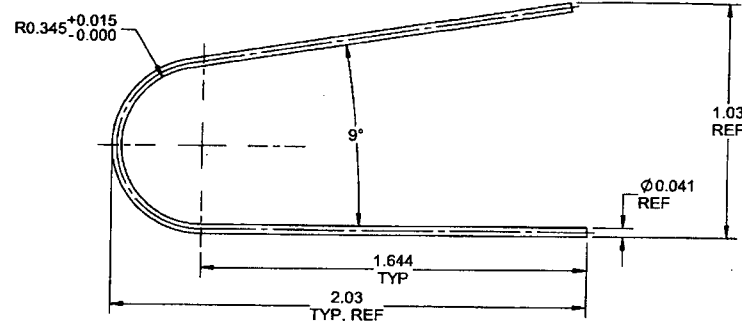
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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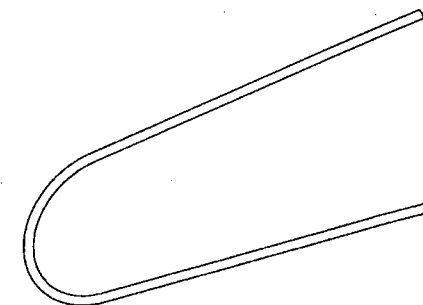


78652

# **SPECIFICATION CONTROL DRAWING**



**D4518-3 LOCK BARREL SPRING**



RELEASE  
2012-01-10

- NOTES:**
- 1) MATERIAL: 301/304 STAINLESS STEEL SPRING WIRE,  $\varnothing 0.041$ , PER ASTM A666/A313
  - 2) FINISH: N/A
  - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
  - 5) BREAK SHARP EDGES: N/A
  - 6) IDENTIFICATION: WITH DART P/N "D4518-3" AND BATCH NUMBER "BXXXXX" PER DART QSI 044 6.6 (REMOVABLE TAG).
  - 7) WEIGHT: LESS THAN 0.01 lbs

DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA
DRAWN		
CHECKED		DRAWING NO. <b>D4518</b> REV. A
MFG. APPR.		SHEET 2 OF 2
APPROVED		TITLE <b>SPRING, LATCH</b> SCALE NTS
DE APPR.		
DATE	<b>11.12.05</b>	

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID **PO15863**

Purchase Order Date 1/12/12

PO Print Date 1/12/12

Page Number 1 of 1

**Order From :**

VC-VIC002

VICTORY SPRING LTD.  
#2 6104 - 82 AVE.  
EDMONTON, AB T6B 0E7  
CA

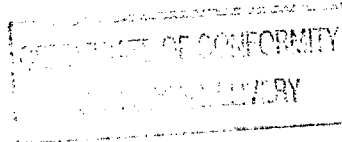
Contact Name		Buyer	Chantal Lavoie
Vendor Phone	866 230 5312	Requisition Nbr	
Vendor Fax	866 230 5338	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

CL 12/01/12

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D4518-1P	Torsion Spring	2/08/12 Yes	50.00 Each	FedEx PI collect	\$4.5600	\$228.00
		Special Inst:	AS PER DWG D4518 REV. A B78651				
2	D4518-3P	Lock Barrel Spring	2/08/12 Yes	50.00 Each	FedEx PI collect	\$4.6000	\$230.00
		Special Inst:	AS PER DWG D4518 REV. A B78652				

PO Total: \$458.00



Change Nbr: 1

Change Date: 1/12/12

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

## CERTIFICATE OF CONFORMANCE

REPORT FOR : Dart Aerospace Ltd	DATE: 2/7/2012
PART/DRAWING #: D4518-3P	PO # PO15863
SPRING DESCRIPTION: Wire Form	QUANTITY: 50

*5/12/02/08*

CHARACTERISTIC	SPECIFIED	MEASURED	NOTES
Material type	SS 302	yes	
Material diameter	0.04	yes	
Coil I.D.	0.345" R	.345 - .360	
Coil O.D.			
Number of Coils			
Free Length	1.644	1.62 - 1.67	
Helix	9 deg.	8 - 11 deg.	
End type	1.03	1.03 - 1.09	

### COMMENTS

Mill Certificate attached:

Material Heat Number: 41249

Inspected by: *Jeremy Burrowes*